

HEARING AID DISPENSERS BUREAU





Candidate Handbook for the **Hearing Aid Dispenser Written Examination**

Issued by:

Hearing Aid Dispensers Bureau

January 2004

Table of Contents

General Guidelines and Information	. 1
Purpose of this handbook Objective of the Hearing Aid Dispensers Bureau Examination Development Examination Plan Passing Score	
The Examination Process	. 4
Applying for the Written Examination Computerized Testing Making an Appointment Abandonment of Application Special Accommodations Understanding the Examination Results	
Examination Security	. 6
Business and Professions Code Section 123	. 7
Written Examination Outline	. 8
Bibliography	27

GENERAL GUIDELINES AND INFORMATION

PURPOSE OF THIS HANDBOOK

The purpose of this handbook is to provide the candidate with specific information about the hearing aid dispensers written examination process and an overview of content areas in which candidates will be examined.

A separate handbook providing detailed information about the practical examination will be provided to the candidate upon applying for the practical examination.

OBJECTIVE OF THE HEARING AID DISPSENSERS BUREAU

State licensing boards are mandated to protect the public by developing licensing examinations that test for minimum competency for those who wish to provide professional services to the public. These examinations require candidates to demonstrate that they possess the minimum knowledge, skills, and abilities (KSAs) that are necessary to perform safely and effectively in independent practice without supervision.

Section 3306 of the Business and Professions Code defines the practice of hearing aid dispensing as:

"... those practices used for the purpose of selection and adaptation of hearing aids, including direct observation of the ear, testing of hearing in connection with the fitting and selling of hearing aids..., taking of earmold impressions, fitting or sale of hearing aids, and any necessary postfitting counseling."

Examinations administered by the Hearing Aid Dispensers Bureau test candidates with regard to the KSAs necessary to perform each job task safely and competently. The written examination is designed to assess the candidate's knowledge as *applied* to job activities of hearing aid dispensers *in actual practice*.

EXAMINATION DEVELOPMENT

The Hearing Aid Dispensers Bureau written examination is developed and maintained with the assistance of the testing specialists of the Department of Consumer Affairs (DCA), Office of Examination Resources (OER). The OER examination development and validation specialists are experts in testing and measurement methodologies. Their responsibility is to ensure that professional testing standards are followed and that the examinations are psychometrically sound, job related, and legally defensible.

_

California licensed hearing aid dispensers are trained by these testing specialists and participate in workshops where examinations are developed. The licensed dispensers are referred to as "Subject Matter Experts" (SMEs). These SMEs write and review multiple-choice questions based specifically on the examination plan, which is a result of the most recent occupational analysis.

The cooperative efforts among the members of the hearing aid dispenser profession, the test development specialists, and the Hearing Aid Dispensers Bureau are necessary to maintain the integrity of the licensure examination process.

EXAMINATION PLAN

The *written* examination is structured into *nine* content areas that are weighted in terms of their proportion of importance in practice:

Area I Obtaining Client History and Information (11%)

Area II Performing Ear Inspection (9%)

Area IV Performing Audiometric Assessment (18%)

Area IV Performing Audiometric Interpretation (7%)

Area V Evaluating Candidacy for Hearing Instruments (7%)

Area VII Evaluating Hearing Instruments (9%)

Area VIII Fitting and Orientation (18%)

Area IX Providing Postfitting Care (10%)

The examination plan (beginning on page 9) represents job tasks and KSAs that licensees are expected to know and perform at the time of licensure. Examination questions are developed *directly* from specific tasks and the KSAs associated with those tasks in the examination plan.

The hearing aid dispensers written examination contains 150 questions. Twenty-five additional questions may be included as "pretest" questions. The pretest questions are scattered throughout the examination and cannot be identified to candidates. However, these questions are *not* part of the candidate's score and are used as pretest (i.e., nonscorable) questions only.

The examination is written in a multiple-choice format and consists of direct questions (what, where, when, why, etc.) and four choices of responses. Only *ONE* of the four choices is the correct answer. In addition, the multiple-choice written examination subject matter will include questions based on audiograms or test data related to the fitting of hearing aids.

Candidates will have a maximum of **3** hours to complete the examination.

PASSING SCORE

The passing score is based upon minimally acceptable competence criteria that represents the KSAs required for entry-level practice. The passing score is established by licensed hearing aid dispensers with the assistance of the test development specialists of OER.

The actual passing score varies *slightly* from examination to examination depending on the difficulty of the examination. Therefore, the passing score is not arbitrarily set; rather, it may vary slightly to account for subtle changes in examination difficulty.

THE EXAMINATION PROCESS

APPLYING FOR THE WRITTEN EXAMINATION

A candidate must be 18 years old at the time of application to sit for the written examination. If age requirements are met, the candidate may complete the Hearing Aid Dispenser license application and submit the required fees to Hearing Aid Dispensers Bureau for processing.

COMPUTERIZED TESTING

The DCA has contracted with Experior Assessment[™], LLC (Experior), of St. Paul, Minnesota to administer the Hearing Aid Dispensers Bureau written examination. Experior provides computerized examinations through its national network of testing centers. Hearing aid dispenser candidates may only test at one of Experior's eight California testing centers, located throughout the state. Other testing site locations will be added based on anticipated statewide annual volume.

Making an Appointment

The candidate will receive a *Notice of Eligibility* from Experior after the Hearing Aid Dispensers Bureau receives and processes the written examination application and fee. The process takes approximately *four* weeks to complete. Upon receipt of the *Notice of Eligibility* (first time or retake), the candidate must arrange a time and place to take the examination by calling Experior. Appointments are available six days per week at most centers. Schedule the test early to get a preferred site and time, preferably within *90* days from the date of the *Notice of Eligibility* from Experior.

Abandonment of Application

Once the candidate is notified that he or she is eligible to take the written examination, the candidate *MUST* sit for the examination within one year or begin the entire application process again. The Hearing Aid Dispensers Bureau considers an application abandoned if the candidate fails to sit for the examination within one year of being notified of eligibility in accordance with Title 16, California Code of Regulations, Section 1399.111. In the event of abandonment, the candidate must submit a new application packet and fee and meet all requirements for licensure at the time of filing.

Reminder: Trainees must take the written examination within the first *ten* months after the trainee license is issued.

SPECIAL ACCOMMODATIONS

The Hearing Aid Dispensers Bureau and Experior fully comply with the *Americans with Disabilities Act* and will provide reasonable accommodations for candidates who request and qualify for special accommodations. Reasonable accommodations are those that do not fundamentally alter the examination or results.

Candidates who have a physical or mental impairment that substantially limits a major life activity may be eligible for accommodations in the testing process, thus ensuring that the tests accurately reflect KSAs. "Major life activities" include the ability to walk, see, hear, speak, breathe, learn, work, care for one's self, and perform manual tasks.

If a candidate requires special accommodations, he or she must submit a completed *Special Accommodations Request* to the Hearing Aid Dispensers Bureau. This form requires that the candidate describe the nature of the disability and its limitations related to the examination, the type of accommodation or modification, and supporting documentation. The supporting documentation must bear the name, professional title, original signature, license number, and telephone number of a licensed medical doctor, medical authority, or other qualified professional.

UNDERSTANDING THE EXAMINATION RESULTS

At the end of the examination, a candidate who has *passed* will not receive a numerical score but will be given a printed "pass" Score Report. However, a candidate who *fails* will be provided his or her actual score, which reflects the number of points earned out of the 150 possible points.

Candidates Who Pass the Examination

Candidates who pass the written examination are eligible to take the practical examination and will be given an application for the Hearing Aid Dispensers practical examination at the Testing Center.

Candidates Who Fail the Examination

Candidates who fail the written examination are eligible to retake the examination at their convenience. Candidates will be given an application to retake the written examination at the Testing Center or may obtain one by calling the Hearing Aid Dispensers Bureau at (916) 327-3433. The written examination application and fee must be submitted directly to the Hearing Aid Dispensers Bureau. Candidates will receive a *Notice of Eligibility* from Experior after the Hearing Aid Dispensers Bureau receives and processes the written reexamination application and fee. The process takes approximately *four* weeks to complete.

EXAMINATION SECURITY

HEARING AID DISPENSERS BUREAU POLICY

The Hearing Aid Dispensers Bureau strictly enforces examination security. A candidate who subverts or attempts to subvert any licensing examination or the administration of a licensing examination will be prosecuted in accordance with Sections 123, 496, and 584 of the Business and Professions Code (see page 7 for a full citation).

Violations of these statutes may result in disqualification from the examination, denial of license, and/or liability for the actual damages sustained by the Bureau, not to exceed \$10,000, and costs of litigation. The provisions of Section 123, 496, and 584 prohibit candidates from:

- permitting an impersonator to take the examination on one's behalf;
- impersonating another to take the examination on that person's behalf;
- communicating examination content to any other person;
- reproducing materials or providing notes of examination content to other candidates or individuals; and,
- obstructing the examination in any way.

BUSINESS & PROFESSIONS CODE SECTIONS REGARDING EXAMINATION SECURITY

- 123. It is a misdemeanor for any person to engage in any conduct which subverts or attempts to subvert any licensing examination or the administration of an examination, including, but not limited to:
 - (a) Conduct which violates the security of the examination materials; removing from the examination room any examination materials without authorization; the unauthorized reproduction by any means of any of the actual licensing examination; aiding by any means the unauthorized reproduction of any portion of the actual licensing examination; paying or using professional or paid examination-takers for the purpose of reconstructing any portion of the licensing examination; obtaining examination questions or other examination material, except by specific authorization either before, during, or after an examination; or using or purporting to use any examination questions or materials which were improperly removed or taken from any examination for the purpose of instructing or preparing any applicant for examination; or selling, distributing, buying, receiving, or having unauthorized possession of any portion of a future, current, or previously administered licensing examination.
 - (b) Communicating with any other candidate during the administration of a licensing examination; copying answers from another candidate or permitting one's answers to be copied by another candidate; having in one's possession during the administration of the licensing examination any books, equipment, notes, written or printed materials, or data of any kind, other than the examination materials distributed, or otherwise authorized to be in one's possession during the examination; or impersonating any candidate or having an impersonator take the licensing examination on one's behalf.
 - (c) If any provision of this section or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of the section that can be given effect without the invalid provision or application, and to this end the provisions of this section are severable.
 - Nothing in this section shall preclude prosecution under the authority provided for in any other provision of law.
 - In addition to any other penalties, a person found guilty of violating this section, shall be liable for the actual damages sustained by the agency administering the examination not to exceed ten thousand dollars (\$10,000) and the costs of litigation.
- 123.5 Whenever any person has engaged, or is about to engage, in any acts or practices which constitute, or will constitute, a violation of Section 123, the superior court in and for the county wherein acts or practices takes place, or are about to take place, may issue an injunction, or other appropriate order, restraining such conduct on application of a board, the Attorney General or the district attorney of the county.
 - The proceedings under this section shall be governed by Chapter 3 (commencing with Section 525) of Title 7 of Part 2 of the Code of Civil Procedure.
 - The remedy provided by this section shall be in addition to, and not a limitation on, the authority provided for in any other provision of law.
- 496. A board may deny, suspend, revoke, or otherwise restrict a license on the ground that an applicant or licensee has violated Section 123 pertaining to subversion of licensing examination.
- No person shall violate the security of any examination, as defined in subdivision (a) of Section 123, or impersonate, attempt to impersonate, or solicit the impersonation of, another in any examination for a license, certificate, or registration to practice as provided in this division, the Osteopathic Act, or the Chiropractic Initiative Act, or under any other law providing for the regulation of any other system or method of treating the sick or afflicted in this state.

CONTENT OUTLINE FOR WRITTEN EXAMINATION

JOB TASKS AND ASSOCIATED KNOWLEDGE STATEMENTS

I. CLIENT HISTORY AND INFORMATION - This area assesses the candidate's ability to gather historical information about the client's hearing loss and its impact on life activities and communication.

Task	Associated Knowledge
Assess predisposition and extent of hearing loss based on client's family history.	Knowledge of inherited health conditions that contribute to hearing loss.
Identify activities that are impacted by hearing loss.	 Knowledge of effects of hearing loss on client's ability to communicate with others. Knowledge of effect of hearing loss on client's lifestyle. Knowledge of ramifications of hearing loss in social relationships. Knowledge of social factors that influence successful hearing instrument use.
Identify incidents of physical and/or acoustic trauma.	 Knowledge of changes in hearing loss that requires medical referral. Knowledge of effect of sensorineural ear pathologies on hearing loss. Knowledge of effect of conductive ear pathologies on hearing loss. Knowledge of health changes that can affect hearing and hearing instrument use. Knowledge of characteristics of hearing losses caused by trauma or exposure.
Assess impact of ear surgeries, diseases, and treatments.	 Knowledge of changes in hearing loss that requires medical referral. Knowledge of effect of conductive ear pathologies on hearing loss. Knowledge of health changes that can affect hearing and hearing instrument use. Knowledge of anatomical changes to ear resulting from ear surgeries. Knowledge of acquired health conditions that contribute to hearing loss. Knowledge of effects of childhood illness on hearing. Knowledge of effects of ototoxic drugs upon hearing.

I. CLIENT HISTORY AND INFORMATION - This area assesses the candidate's ability to gather historical information about the client's hearing loss and its impact on life activities and communication.

Task	Associated Knowledge
Assess changes in hearing from previous audiometric and tympanometric evaluations.	 Knowledge of changes in hearing loss that requires medical referral. Knowledge of techniques to differentiate effective from ineffective fittings. Knowledge of effect of sensorineural ear pathologies on hearing loss. Knowledge of effect of conductive ear pathologies on hearing loss. Knowledge of criteria for significant changes in hearing sensitivity. Knowledge of health changes that can affect hearing and hearing instrument use. Knowledge of acquired health conditions that contribute to hearing loss. Knowledge of effect of neurological pathologies on hearing loss. Knowledge of effects of ototoxic drugs upon hearing. Knowledge of different types of tympanograms.
Determine need for referral based on history of otological symptoms.	 Knowledge of changes in hearing loss that requires medical referral. Knowledge of federal statutes pertaining to symptoms requiring medical referral.
Determine client's previous experiences with hearing instruments.	Knowledge of effect of previous amplification experiences on client's motivations for hearing assistance.
Assess effects of hearing loss upon family members or others.	 Knowledge of effects of hearing loss on client's ability to communicate with others. Knowledge of effect of hearing loss on client's lifestyle. Knowledge of ramifications of hearing loss in social relationships. Knowledge of social factors that influence successful hearing instrument use.

I. CLIENT HISTORY AND INFORMATION - This area assesses the candidate's ability to gather historical information about the client's hearing loss and its impact on life activities and communication.

Task	Associated Knowledge
Identify factors in medical history that may affect hearing health and instrument fitting.	 Knowledge of effect of sensorineural ear pathologies on hearing loss. Knowledge of effect of conductive ear pathologies on hearing loss. Knowledge of health changes that can affect hearing and hearing instrument use. Knowledge of acquired health conditions that contribute to hearing loss. Knowledge of effect of neurological pathologies on hearing loss. Knowledge of inherited health conditions that contribute to hearing loss. Knowledge of effects of childhood illness on hearing. Knowledge of effects of ototoxic drugs upon hearing.

II. EAR INSPECTION - This area assesses the candidate's ability to evaluate the external ear and determine the feasibility of fitting hearing instruments.

Task	Associated Knowledge
Assess external ear for signs of infection or disease.	 Knowledge of techniques to conduct otoscopic inspection. Knowledge of types of health conditions of external ear requiring medical referral. Knowledge of methods and procedures to visually inspect external ear. Knowledge of federal statutes pertaining to contraindications for fitting hearing instruments.
Assess external ear for signs of canal collapse or blockage.	 Knowledge of techniques to conduct otoscopic inspection. Knowledge of methods and procedures to visually inspect external ear.
Assess external ear for signs of deformities and irregularities.	 Knowledge of techniques to conduct otoscopic inspection. Knowledge of methods and procedures to visually inspect external ear. Knowledge of techniques to determine presence of pressure equalization tubes.
Assess size, length, and direction of ear canal.	 Knowledge of techniques to conduct otoscopic inspection. Knowledge of anatomy and physiology of ear relevant to fitting of hearing instruments. Knowledge of methods and procedures to visually inspect external ear.
Assess condition of tympanic membrane.	 Knowledge of techniques to conduct otoscopic inspection. Knowledge of characteristics of normal and abnormal tympanic membranes. Knowledge of techniques to determine presence of pressure equalization tubes.

Task	Associated Knowledge
Sanitize equipment and implements prior to ear inspection.	 Knowledge of techniques to conduct otoscopic inspection. Knowledge of materials and procedures to establish sanitary conditions prior to ear inspection.

I.	EAR INSPECTION - hearing instruments.	- This area assesses the candidate's ability to evaluate the external ear and determine the feasibility of fitting.	าg

III. AUDIOMETRIC ASSESSMENT - This area assesses the candidate's ability to determine hearing ability from pure tone and speech tests.

Task	Associated Knowledge
Establish pure tone air conduction thresholds.	 Knowledge of methods for establishing pure tone thresholds. Knowledge of purposes of pure tone tests. Knowledge of basic operation and function of audiometric equipment. Knowledge of procedures to establish dynamic range of hearing.
Establish pure tone bone conduction thresholds.	 Knowledge of methods for establishing pure tone thresholds. Knowledge of purposes of pure tone tests. Knowledge of basic operation and function of audiometric equipment.
Determine presence of collapsed ear canal based on audiometric test results.	 Knowledge of criteria that determine significant air-bone gap. Knowledge of effects of ear pathologies on audiometric testing.
Establish uncomfortable level (UCL/LDL) for speech.	 Knowledge of basic operation and function of audiometric equipment. Knowledge of purposes of speech tests. Knowledge of procedures to establish dynamic range of hearing.
Determine need for masking for pure tone air conduction testing.	 Knowledge of procedures for masking for speech or pure tones. Knowledge of principles of masking for speech or pure tones. Knowledge of basic operation and function of audiometric equipment.
Determine need for masking for pure tone bone conduction testing.	 Knowledge of criteria that determine significant air-bone gap. Knowledge of procedures for masking for speech or pure tones. Knowledge of principles of masking for speech or pure tones. Knowledge of basic operation and function of audiometric equipment.

Task	Associated Knowledge
Establish speech reception threshold.	Knowledge of basic operation and function of audiometric equipment.
	Knowledge of purposes of speech tests.
	Knowledge of methods for establishing speech reception thresholds.
	Knowledge of procedures to establish dynamic range of hearing.

III. AUDIOMETRIC ASSESSMENT - This area assesses the candidate's ability to determine hearing ability from pure tone and speech tests.

Task	Associated Knowledge
Perform physical and listening check of audiometric equipment.	Knowledge of basic operation and function of audiometric equipment.
Determine need for masking for speech.	 Knowledge of procedures for masking for speech or pure tones. Knowledge of principles of masking for speech or pure tones.
Determine presence of air-bone gap.	 Knowledge of methods for establishing pure tone thresholds. Knowledge of criteria that determine significant air-bone gap. Knowledge of principles of masking for speech or pure tones. Knowledge of basic operation and function of audiometric equipment. Knowledge of procedures for testing clients with collapsing ear canals.
Determine speech discrimination score.	 Knowledge of basic operation and function of audiometric equipment. Knowledge of purposes of speech tests. Knowledge of methods for obtaining speech discrimination scores.
Establish most comfortable level (MCL) for speech and/or pure tones.	 Knowledge of basic operation and function of audiometric equipment. Knowledge of purposes of speech tests. Knowledge of methods for obtaining speech discrimination scores.
Establish threshold of discomfort (TD) for pure tones.	 Knowledge of basic operation and function of audiometric equipment. Knowledge of procedures to establish dynamic range of hearing.

IV. AUDIOMETRIC INTERPRETATION - This area assesses the candidate's ability to evaluate severity, type, and configuration of hearing loss from audiometric test results.

Task	Associated Knowledge
Explain implications of hearing loss on lifestyle to client.	 Knowledge of effects of discrimination scores on hearing instrument use. Knowledge of techniques to communicate results of audiometric tests to client in a nontechnical way.
Explain results of audiometric tests to client.	 Knowledge of state and federal statutes regarding audiometric results requiring medical referral. Knowledge of effects of discrimination scores on hearing instrument use. Knowledge of techniques to communicate results of audiometric tests to client in a nontechnical way.
Determine degree, type, and configuration of hearing loss from audiometric results.	 Knowledge of specific types, degrees, and configurations of hearing loss indicated by audiometric results. Knowledge of behavioral and audiometric indications of valid and reliable test results. Knowledge of significance of changes in audiometric results.
Assess consistency of the relationship between pure tone and speech data.	 Knowledge of specific types, degrees, and configurations of hearing loss indicated by audiometric results. Knowledge of relationship between audiological results and speech discrimination. Knowledge of behavioral and audiometric indications of valid and reliable test results.
Identify similarities and differences in previous and current audiometric test results.	Knowledge of significance of changes in audiometric results.

V. EVALUATING CANDIDACY FOR HEARING INSTRUMENTS - This area assesses the candidate's ability to determine if a client will benefit from the use of amplification.

Task	Associated Knowledge
Determine need for monaural vs. binaural hearing instruments.	 Knowledge of relationship between different degrees, types, and configurations of hearing loss and physical acoustic properties of hearing instruments. Knowledge of indications for monaural vs. binaural hearing instruments. Knowledge of techniques to evaluate client's expectations and motivation for hearing instrument use.
Evaluate client's attitudes and expectations towards amplification.	 Knowledge of physical and cognitive factors that influence successful hearing instrument use. Knowledge of techniques to evaluate client's expectations and motivation for hearing instrument use.
Determine client's candidacy for options or circuits.	 Knowledge of relationship between different degrees, types, and configurations of hearing loss and physical acoustic properties of hearing instruments. Knowledge of relationship between different degrees, types, and configurations of hearing loss, and physical properties of the earmold/shell. Knowledge of dynamic range and probable success of hearing instrument use. Knowledge of relationship between different degrees, types, and configurations of hearing loss and electroacoustic properties of hearing instruments. Knowledge of relationship between ear size and shape and physical properties of hearing instruments.

Task	Associated Knowledge

V. EVALUATING CANDIDACY FOR HEARING INSTRUMENTS - This area assesses the candidate's ability to determine if a client will benefit from the use of amplification.

Task	Associated Knowledge
Determine client's need for amplification based on degree, type, and configuration of hearing loss.	 Knowledge of relationship between different degrees, types, and configurations of hearing loss and physical acoustic properties of hearing instruments. Knowledge of indications for monaural vs. binaural hearing instruments. Knowledge of dynamic range and probable success of hearing instrument use.
Determine benefits and limitations of hearing instruments based on dispenser's evaluation of client's physical needs and abilities.	 Knowledge of indications for monaural vs. binaural hearing instruments. Knowledge of relationship between different degrees, types, and configurations of hearing loss, and physical properties of the earmold/shell. Knowledge of benefits of amplification for various types of hearing losses and lifestyles. Knowledge of dynamic range and probable success of hearing instrument use. Knowledge of physical and cognitive factors that influence successful hearing instrument use. Knowledge of relationship between ear size and shape and physical properties of hearing instruments.

VI. SELECTING CHARACTERISTICS OF HEARING INSTRUMENTS - This area assesses the candidate's ability to select circuitry and acoustic options for hearing instruments.

Task	Associated Knowledge
Select gain of hearing instrument.	 Knowledge of relationship between audiometric data and hearing instrument specifications. Knowledge of different types of dispenser-controlled hearing instrument options. Knowledge of different types of user-controlled hearing instrument options. Knowledge of procedures to select electroacoustic characteristics of hearing instruments.
Select frequency response of hearing instrument.	 Knowledge of relationship between audiometric data and hearing instrument specifications. Knowledge of different types of dispenser-controlled hearing instrument options. Knowledge of different types of user-controlled hearing instrument options. Knowledge of procedures to select electroacoustic characteristics of hearing instruments.
Select maximum power output of hearing instrument.	 Knowledge of relationship between audiometric data and hearing instrument specifications. Knowledge of different types of dispenser-controlled hearing instrument options. Knowledge of federal standards for safe levels of maximum output for hearing instruments. Knowledge of procedures to select electroacoustic characteristics of hearing instruments.
Select style of hearing instrument.	 Knowledge of different types of dispenser-controlled hearing instrument options. Knowledge of different styles of hearing instruments. Knowledge of relationship between audiometric data and hearing instrument specifications. Knowledge of different types of user-controlled hearing instrument options. Knowledge of effect of previous amplification experiences on instrument selection.

VI. SELECTING CHARACTERISTICS OF HEARING INSTRUMENTS - This area assesses the candidate's ability to select circuitry and acoustic options for hearing instruments.

Task	Associated Knowledge
Select characteristics of earmold/shell.	 Knowledge of different styles of hearing instruments. Knowledge of relationship between audiometric data and hearing instrument specifications. Knowledge of effect of previous amplification experiences on instrument selection.
Select dispenser-controlled options of hearing instrument.	 Knowledge of programmable hearing instrument technologies. Knowledge of relationship between audiometric data and hearing instrument specifications. Knowledge of different types of dispenser-controlled hearing instrument options. Knowledge of effect of previous amplification experiences on instrument selection. Knowledge of procedures to select electroacoustic characteristics of hearing instruments. Knowledge of non-programmable hearing instrument technologies.
Select hearing instrument circuitry.	 Knowledge of programmable hearing instrument technologies. Knowledge of relationship between audiometric data and hearing instrument specifications. Knowledge of effect of previous amplification experiences on instrument selection. Knowledge of procedures to select electroacoustic characteristics of hearing instruments. Knowledge of nonprogrammable hearing instrument technologies.

VII. EVALUATING HEARING INSTRUMENTS - This area assesses the candidate's ability to determine if hearing instruments meet manufacturer and dispenser specifications.

Task	Associated Knowledge
Evaluate gain of hearing instrument.	 Knowledge of procedures to assess electroacoustic performance of hearing instruments. Knowledge of standards for hearing instrument performance of the American National Standards Institute (ANSI).
Evaluate total harmonic distortion of hearing instrument.	 Knowledge of procedures to assess electroacoustic performance of hearing instruments. Knowledge of standards for hearing instrument performance of the American National Standards Institute (ANSI).
Evaluate sound saturation pressure level of hearing instrument.	 Knowledge of safe levels of maximum output for hearing instruments. Knowledge of procedures to assess electroacoustic performance of hearing instruments. Knowledge of standards for hearing instrument performance of the American National Standards Institute (ANSI).
Evaluate function of telecoil of hearing instrument.	Knowledge of listening check procedures for evaluating hearing instrument performance.
Evaluate frequency response of hearing instrument.	 Knowledge of procedures to assess electroacoustic performance of hearing instruments. Knowledge of standards for hearing instrument performance of the American National Standards Institute (ANSI).
Evaluate intermittency, distortion, and linearity of volume control.	 Knowledge of listening check procedures for evaluating hearing instrument performance. Knowledge of procedures to assess electroacoustic performance of hearing instruments. Knowledge of standards for hearing instrument performance of the American National Standards Institute (ANSI).

VII. EVALUATING HEARING INSTRUMENTS - This area assesses the candidate's ability to determine if hearing instruments meet manufacturer and dispenser specifications.

Task	Associated Knowledge
Evaluate circuit noise in the hearing instrument.	 Knowledge of procedures to assess electroacoustic performance of hearing instruments. Knowledge of listening check procedures for evaluating hearing instrument performance. Knowledge of standards for hearing instrument performance of the American National Standards Institute (ANSI).
Evaluate hearing instrument for internal feedback.	 Knowledge of procedures for identifying causes of feedback in hearing instruments. Knowledge of listening check procedures for evaluating hearing instrument performance.

VIII. FITTING AND ORIENTATION - This area assesses the candidate's ability to validate fitting and instruct client in care and use of hearing instrument.

Task	Associated Knowledge
Inform client of dispenser's legal obligations pertaining to refund, replacement, and adjustment of hearing instrument.	 Knowledge of state statutes pertaining to legal obligations for sale and fitting of hearing instruments.
Validate hearing instrument fitting with postfitting measurement.	 Knowledge of procedures for sound field testing. Knowledge of procedures for real-ear measurement.
Set acoustic characteristics of hearing instrument.	 Knowledge of common client complaints during fitting process. Knowledge of effect of physical modifications of earmold/shell on acoustic performance. Knowledge of relationship between adjustable acoustic characteristics of hearing instrument and client perceptions of sound quality.
Assess functional gain in sound field.	Knowledge of procedures for sound field testing.
Instruct client on insertion and removal of hearing instrument.	 Knowledge of common client complaints during fitting process. Knowledge of techniques to instruct client about insertion and removal of hearing instrument.
Instruct client on use of hearing instrument controls.	Knowledge of techniques to instruct client about how to use manual controls and features on hearing instruments.
Assess aided speech discrimination in sound field.	Knowledge of procedures for sound field testing.
Assess physical fit of hearing instrument.	 Knowledge of procedures to modify physical fit of hearing instrument. Knowledge of common client complaints during fitting process. Knowledge of effect of physical modifications of earmold/shell on acoustic performance.

VIII. FITTING AND ORIENTATION - This area assesses the candidate's ability to validate fitting and instruct client in care and use of hearing instrument.

Task	Associated Knowledge
Instruct client on communication strategies in different listening environments.	Knowledge of strategies for maximizing communication in different listening environments.
Instruct client about care, use, and disposal of batteries.	Knowledge of procedures for care, use, and disposal of hearing instrument batteries.
Instruct client on hearing instrument care and maintenance.	Knowledge of techniques to instruct client about hearing instrument maintenance.
Establish realistic expectations for hearing instrument use.	 Knowledge of common client complaints during fitting process. Knowledge of the adaptation process of new hearing instrument users. Knowledge of strategies for maximizing communication in different listening environments.
Instruct client on telephone use with hearing instrument.	 Knowledge of techniques to instruct client about how to use manual controls and features on hearing instruments. Knowledge of the adaptation process of new hearing instrument users. Knowledge of strategies for maximizing communication in different listening environments.

IX. POSTFITTING CARE - This area assesses the candidate's ability to identify sources of mechanical and acoustic problems associated with common client complaints.

Task	Associated Knowledge
Determine need to repair, replace, or adjust hearing instrument.	 Knowledge of techniques to modify acoustic characteristics or earmold/hearing instrument based on client's complaints. Knowledge of indicators of internal malfunction that suggest need to return hearing instrument to manufacturer. Knowledge of procedures to assess causes of hearing instrument malfunction. Knowledge of techniques to differentiate changes in client's hearing needs from mechanically-caused malfunction of hearing instrument. Knowledge of techniques to differentiate external and internal feedback. Knowledge of techniques to eliminate acoustic feedback.
Assess causes of external feedback.	 Knowledge of techniques to eliminate acoustic feedback. Knowledge of techniques to differentiate external and internal feedback.
Determine type of feedback.	 Knowledge of techniques to differentiate external and internal feedback. Knowledge of indicators of internal malfunction that suggest need to return hearing instrument to manufacturer. Knowledge of procedures to assess causes of hearing instrument malfunction.
Assess cause of hearing instrument malfunction.	 Knowledge of techniques to modify acoustic characteristics or earmold/hearing instrument based on client's complaints. Knowledge of indicators of internal malfunction that suggest need to return hearing instrument to manufacturer. Knowledge of procedures to assess causes of hearing instrument malfunction. Knowledge of techniques to differentiate changes in client's hearing needs from mechanically-caused malfunction of hearing instrument. Knowledge of techniques to differentiate external and internal feedback.
Assess cause of hearing instrument malfunction.	Knowledge of techniques to eliminate acoustic feedback.

IX. POSTFITTING CARE - This area assesses the candidate's ability to identify sources of mechanical and acoustic problems associated with common client complaints.

Task	Associated Knowledge
Identify adjustments to be performed based on client complaints.	 Knowledge of techniques to modify acoustic characteristics or earmold/hearing instrument based on client's complaints. Knowledge of indicators of internal malfunction that suggest need to return hearing instrument to manufacturer. Knowledge of procedures to assess causes of hearing instrument malfunction. Knowledge of techniques to differentiate changes in client's hearing needs from mechanically-caused malfunction of hearing instrument. Knowledge of techniques to differentiate external and internal feedback. Knowledge of techniques to eliminate acoustic feedback.
Assess level of distortion in hearing instrument.	 Knowledge of indicators of internal malfunction that suggest need to return hearing instrument to manufacturer. Knowledge of procedures to assess causes of hearing instrument malfunction.
Assess client's ability to use hearing instrument.	Knowledge of techniques to conduct ongoing assessment of client's proficiency in hearing instrument use.

Written Examination Bibliography

Chartrand, Ph.D., Max S. <u>Hearing Instrument Counseling: Practical Applications for Counseling the Hearing Impaired.</u> 1999: International Hearing Society.

Donaldson, M.A., Linda L. <u>Masking: Practical Applications of Masking Principles and Procedures</u>. 1999: International Hearing Society.

Katz, Ph.D., Jack. Handbook of Clinical Audiology. 4th ed. 1994: William & Wilkins.

Martin, Ph.D., Frederick & Clark, John Greer. <u>Introduction to Audiology</u>. 7th ed. 1999: Allyn & Bacon (USIB #0205295363)

Sandlin, Ph.D., Robert E. <u>Hearing Instrument Science and Fitting Practices</u>. 1996: International Hearing Society.

Stach, Brad. Comprehensive Dictionary of Audiology. 1997: International Hearing Society.

<u>Training Manual for Professionals in the Field of Hearing Instrument Sciences</u>. 1998: International Hearing Society.

Zelnick, Ernest. <u>Hearing Instrument Selection and Evaluation</u>. 1987: International Hearing Society.

California: Laws and Rules and Regulations Related to the Practice of Hearing Aid Dispensing, Chapter 7.5 of Business & Professions Code and Chapter 3.3 of Title 16 of the Government Code. (2002).

Reference books are available from:

Allyn & Bacon (<u>www.ablongman.com</u>) 75 Arlington Street, Suite 300 Boston, MA 02116 (800) 278-0325

Amazon Book Stores (<u>www.amazon.com</u>) Instrument Studies William & Wilkins (www.wwilkins.com) 428 East Preston Street Baltimore, MD 21202 (800) 638-0672

International Hearing Institute for Hearing (www.pitt.edu)
20361 Middlebelt Road, #4
Livonia, MI 48154
(734) 522-7200 / Fax (734) 522-0200
(800) 521-5247